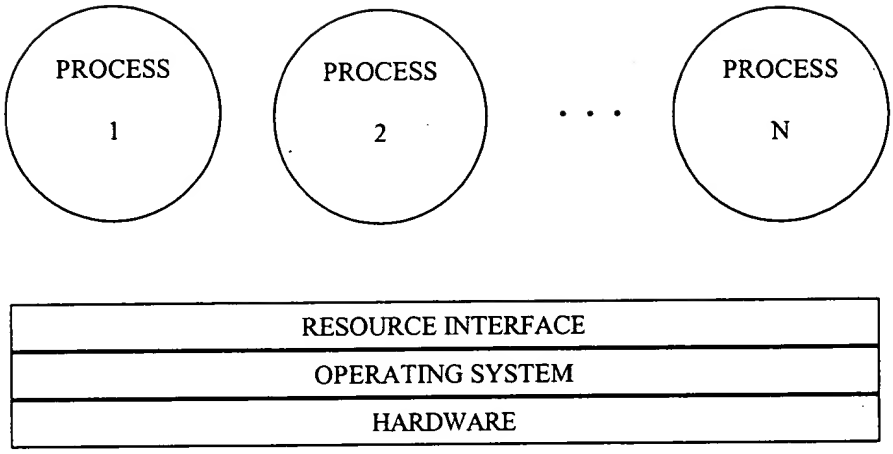

PROCESS
1
PROCESS
2
PROCESS
N
RESOURCE INTERFACE
OPERATING SYSTEM
HARDWARE

FIGURE 1

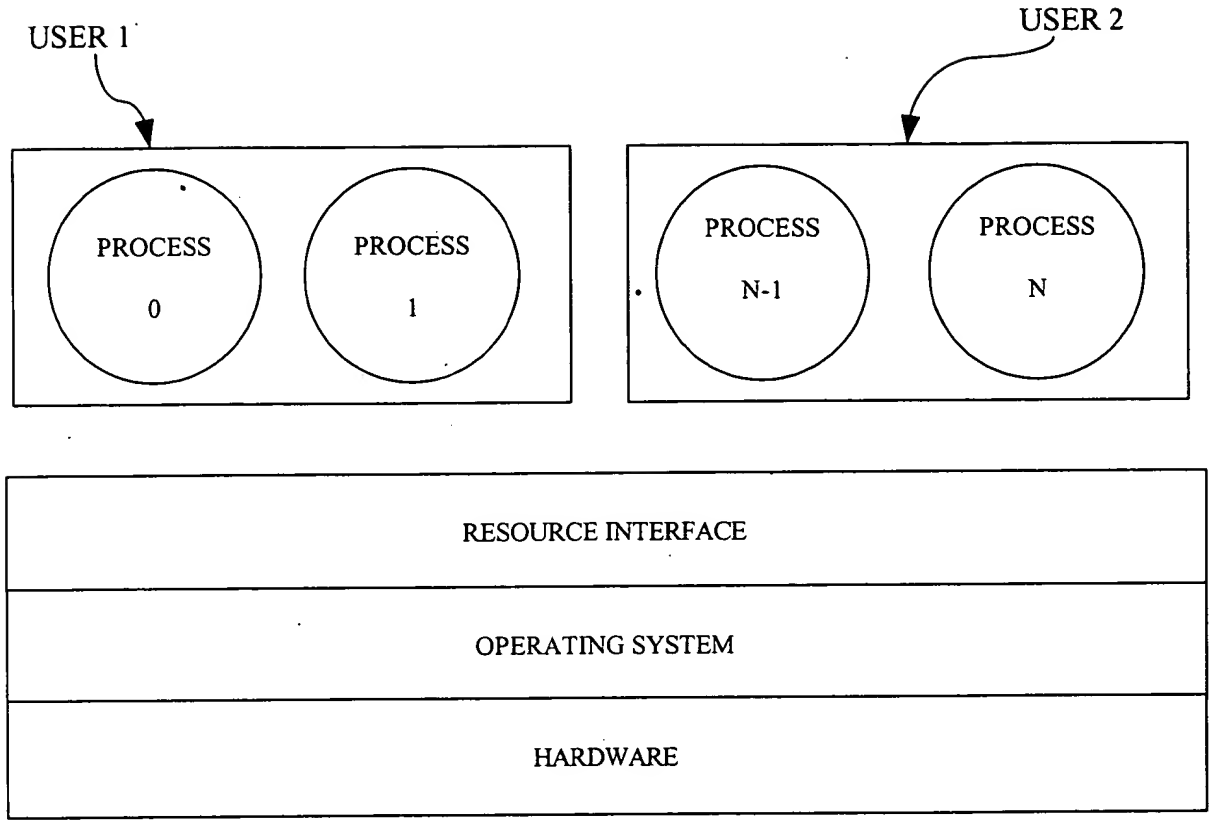

USER 1
USER 2
PROCESS 0
PROCESS 1
PROCESS N-1
PROCESS N
RESOURCE INTERFACE
OPERATING SYSTEM
HARDWARE

FIGURE 2

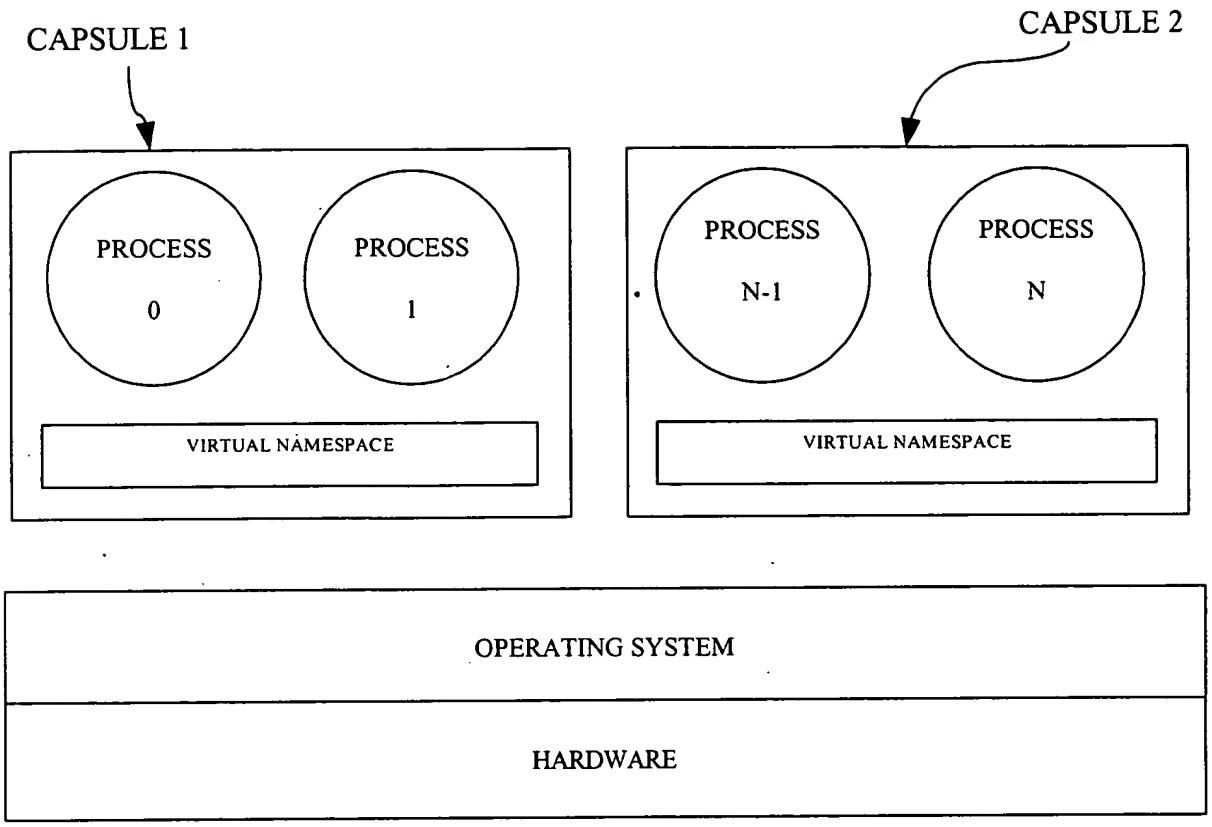

CAPSULE 1
CAPSULE 2
PROCESS 0
PROCESS 1
PROCESS N-1
PROCESS N
VIRTUAL NAMESPACE
VIRTUAL NAMESPACE
OPERATING SYSTEM
HARDWARE

FIGURE 3

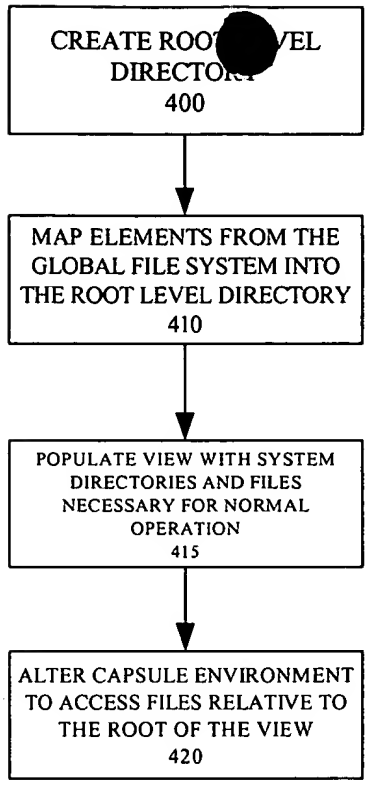

CREATE ROOT LEVEL DIRECTORY
400
MAP ELEMENTS FROM THE GLOBAL FILE SYSTEM INTO THE ROOT LEVEL DIRECTORY
410
POPULATE VIEW WITH SYSTEM DIRECTORIES AND FILES NECESSARY FOR NORMAL OPERATION
415
ALTER CAPSULE ENVIRONMENT TO ACCESS FILES RELATIVE TO THE ROOT OF THE VIEW
420

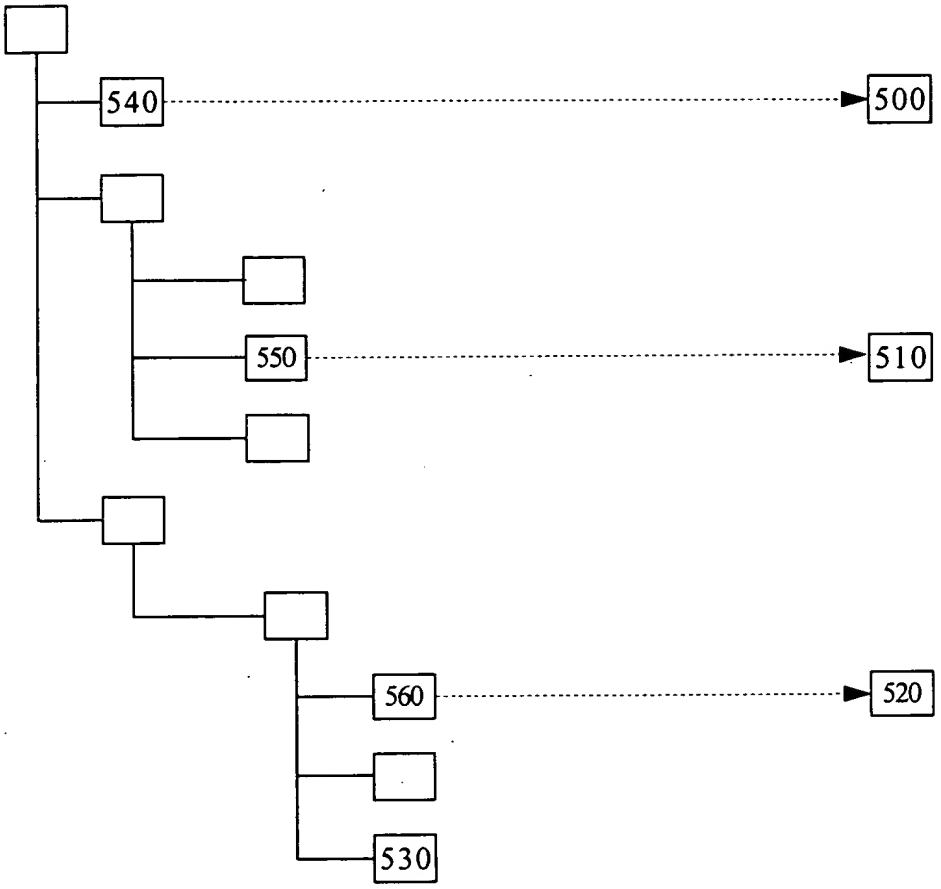
FIGURE 4

FIGURE 5

CAPSULE NAMESPACE CONTENTS

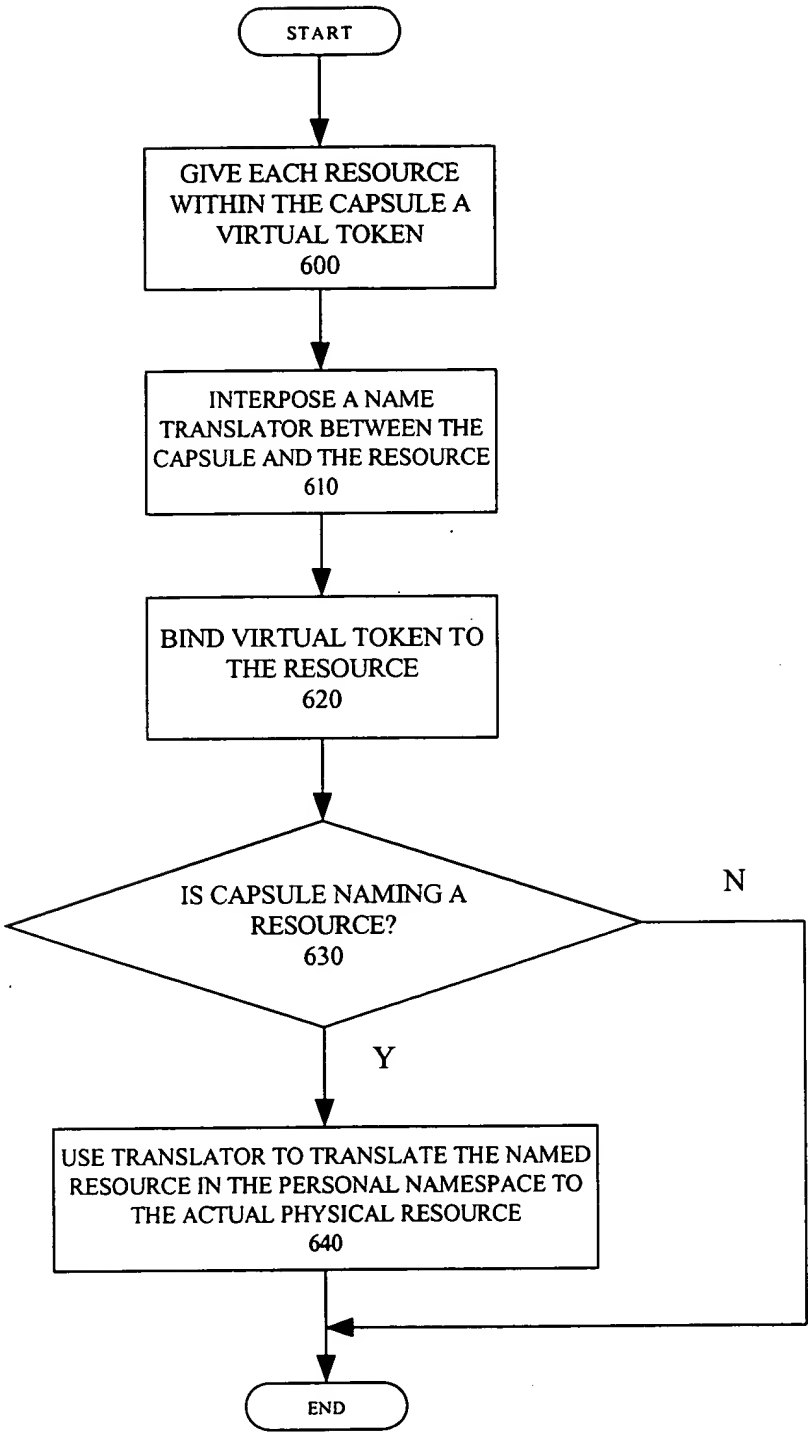
FILE SYSTEM NAMESPACE STRUCTURE

FILE CONTENTS



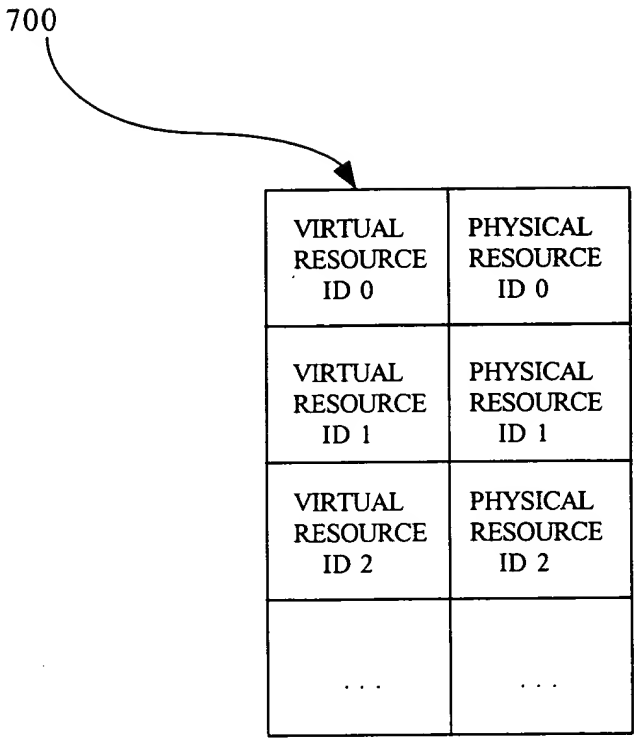
Patent: 6,938,039

FIGURE 6



Docket: 6,785,768

FIGURE 7


700
VIRTUAL RESOURCE ID 0
PHYSICAL RESOURCE ID 0
VIRTUAL RESOURCE ID 1
PHYSICAL RESOURCE ID 1
VIRTUAL RESOURCE ID 2
PHYSICAL RESOURCE ID 2
. . .
. . .

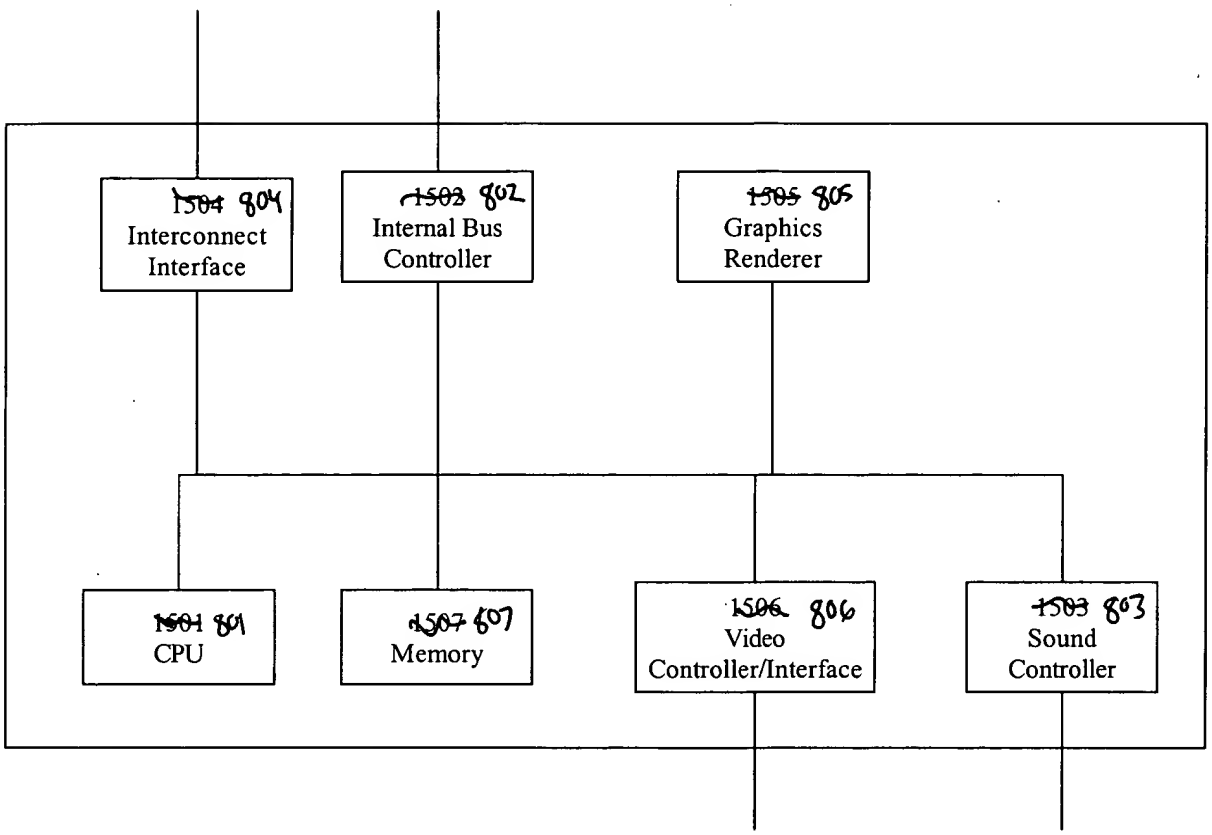
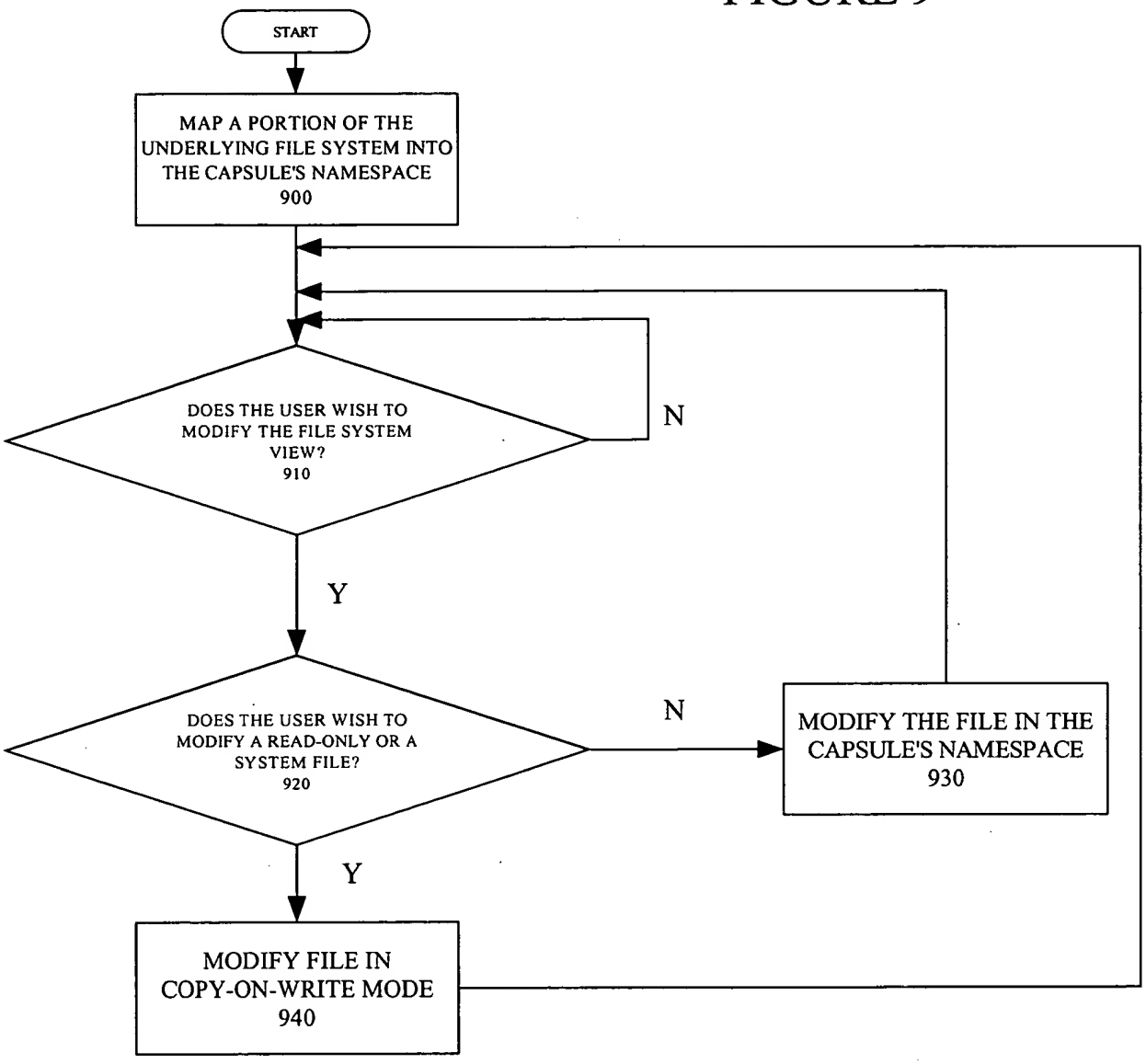


Figure 8: HID Single Chip Implementation

FIGURE 9


START
MAP A PORTION OF THE UNDERLYING FILE SYSTEM INTO THE CAPSULE'S NAMESPACE
900
DOES THE USER WISH TO MODIFY THE FILE SYSTEM VIEW?
910
N
Y
DOES THE USER WISH TO MODIFY A READ-ONLY OR A SYSTEM FILE?
920
N
MODIFY THE FILE IN THE CAPSULE'S NAMESPACE
930
Y
MODIFY FILE IN COPY-ON-WRITE MODE
940

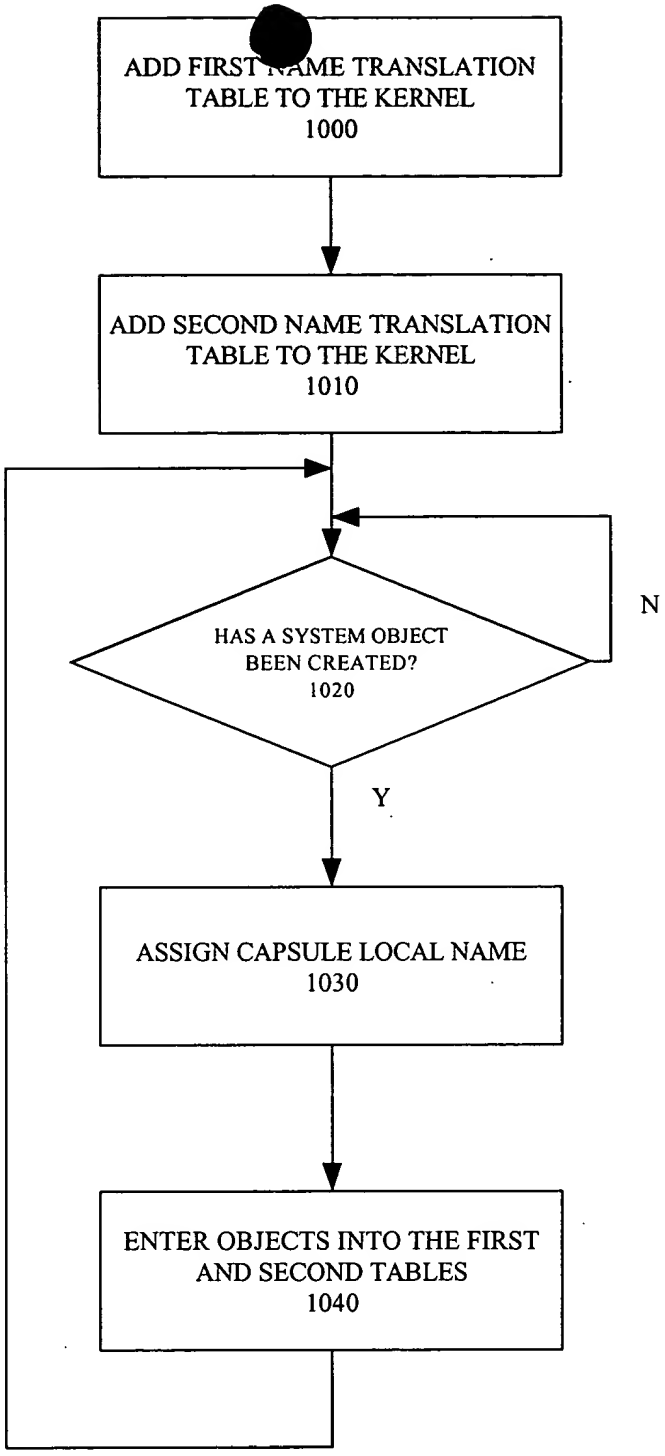


FIGURE 10

EXPRESS MAIL NO. EL 929 569 260 US

Docket: 5055.050

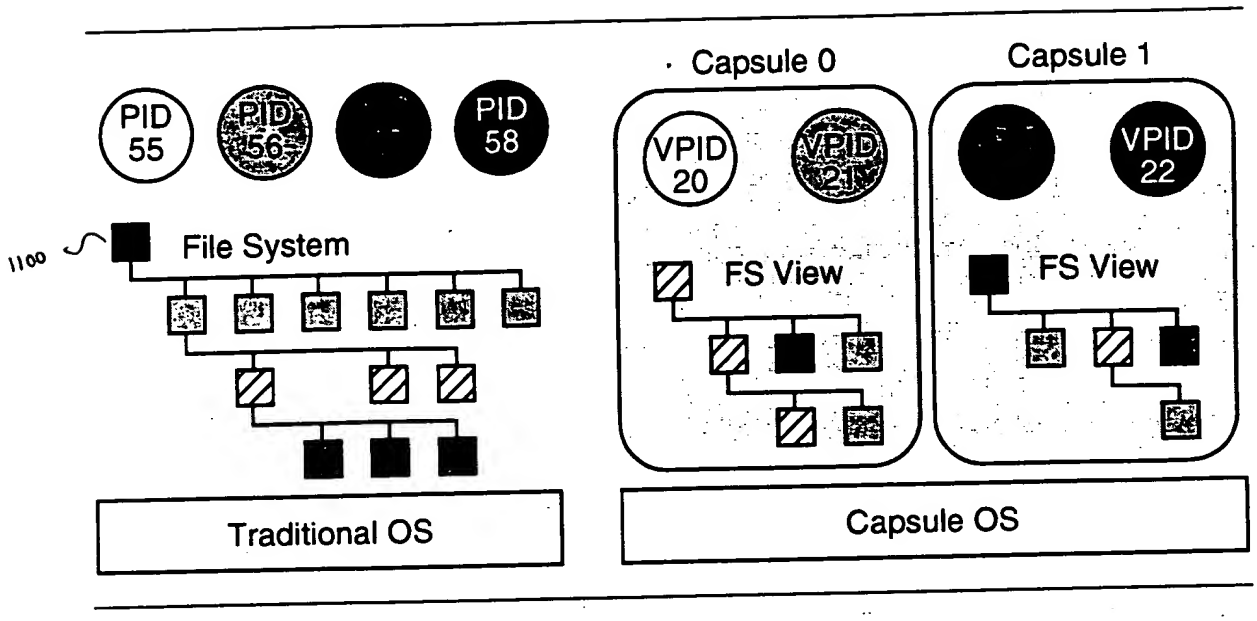


Figure 11

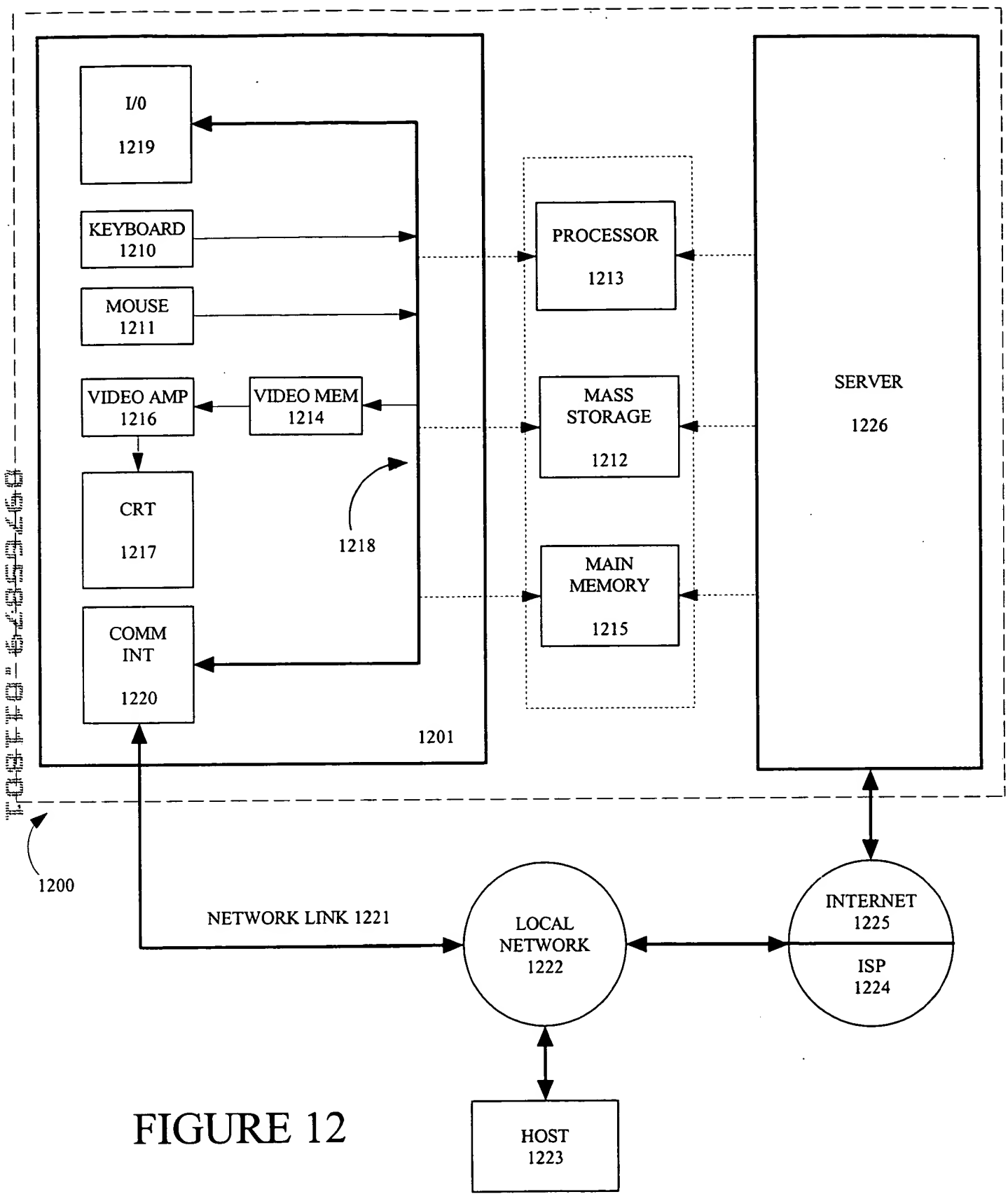

I/0
1219
KEYBOARD
1210
MOUSE
1211
VIDEO AMP
1216
VIDEO MEM
1214
CRT
1217
1218
COMM
INT
1220
1201
PROCESSOR
1213
MASS
STORAGE
1212
MAIN
MEMORY
1215
SERVER
1226
1200
NETWORK LINK 1221
LOCAL
NETWORK
1222
INTERNET
1225
ISP
1224
HOST
1223

FIGURE 12

FOR: 6765259

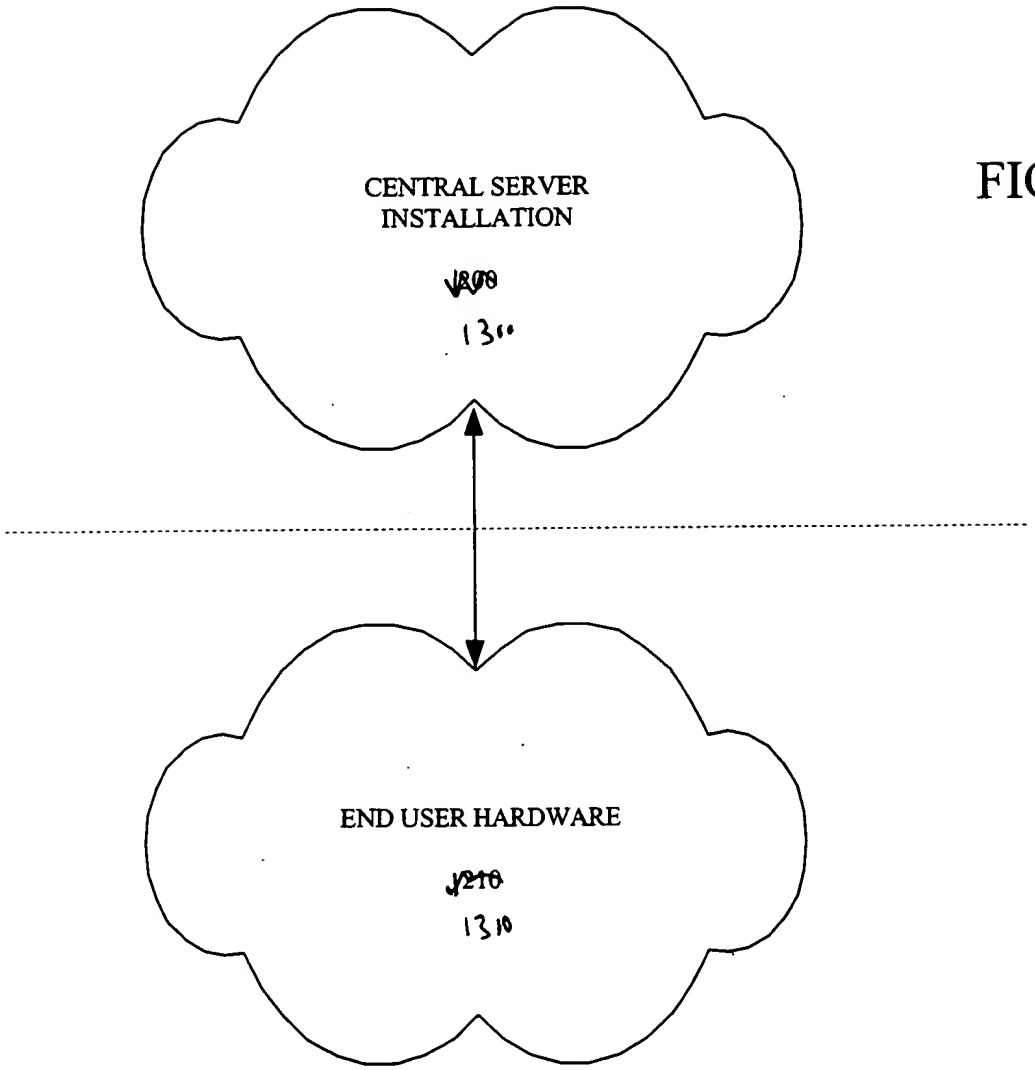


FIGURE 13

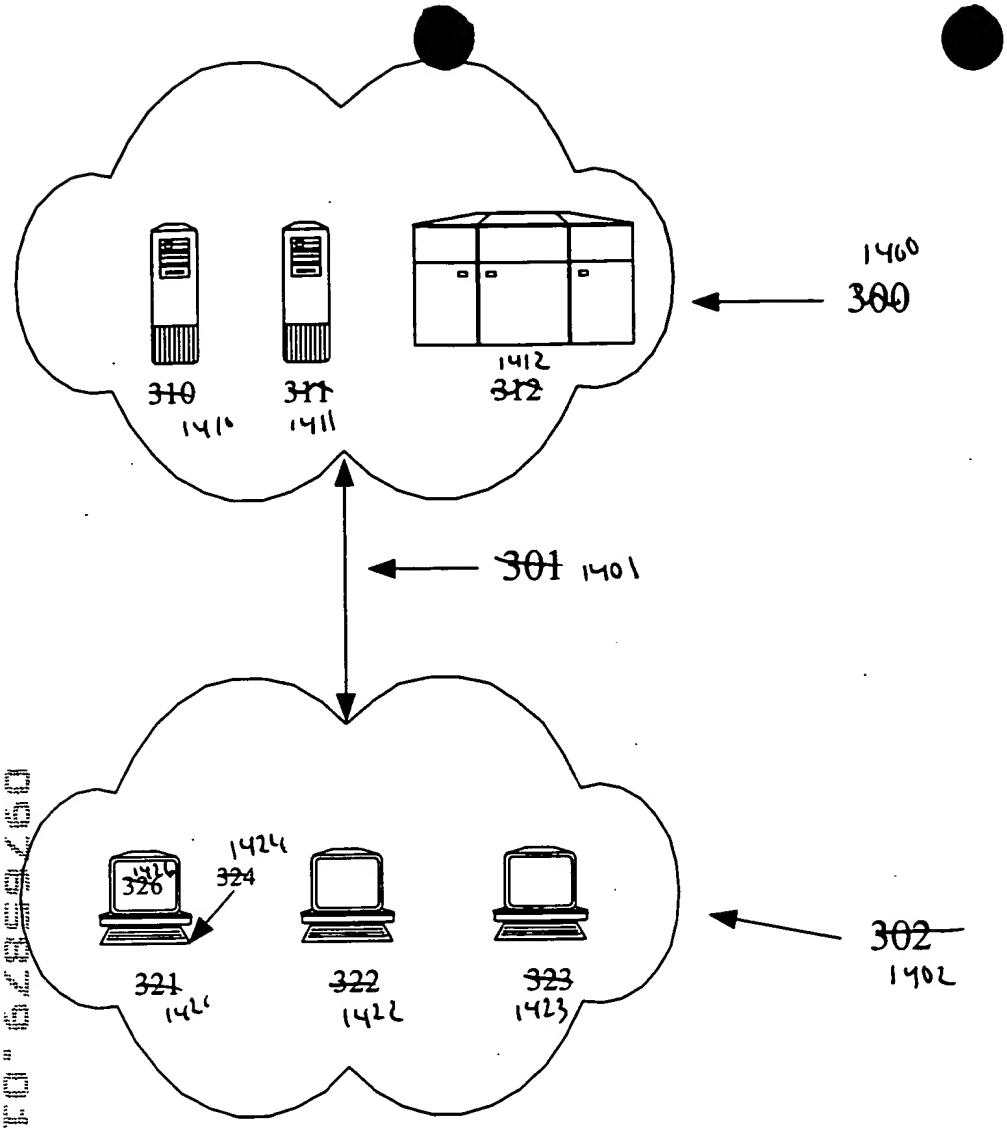


FIGURE 3 14

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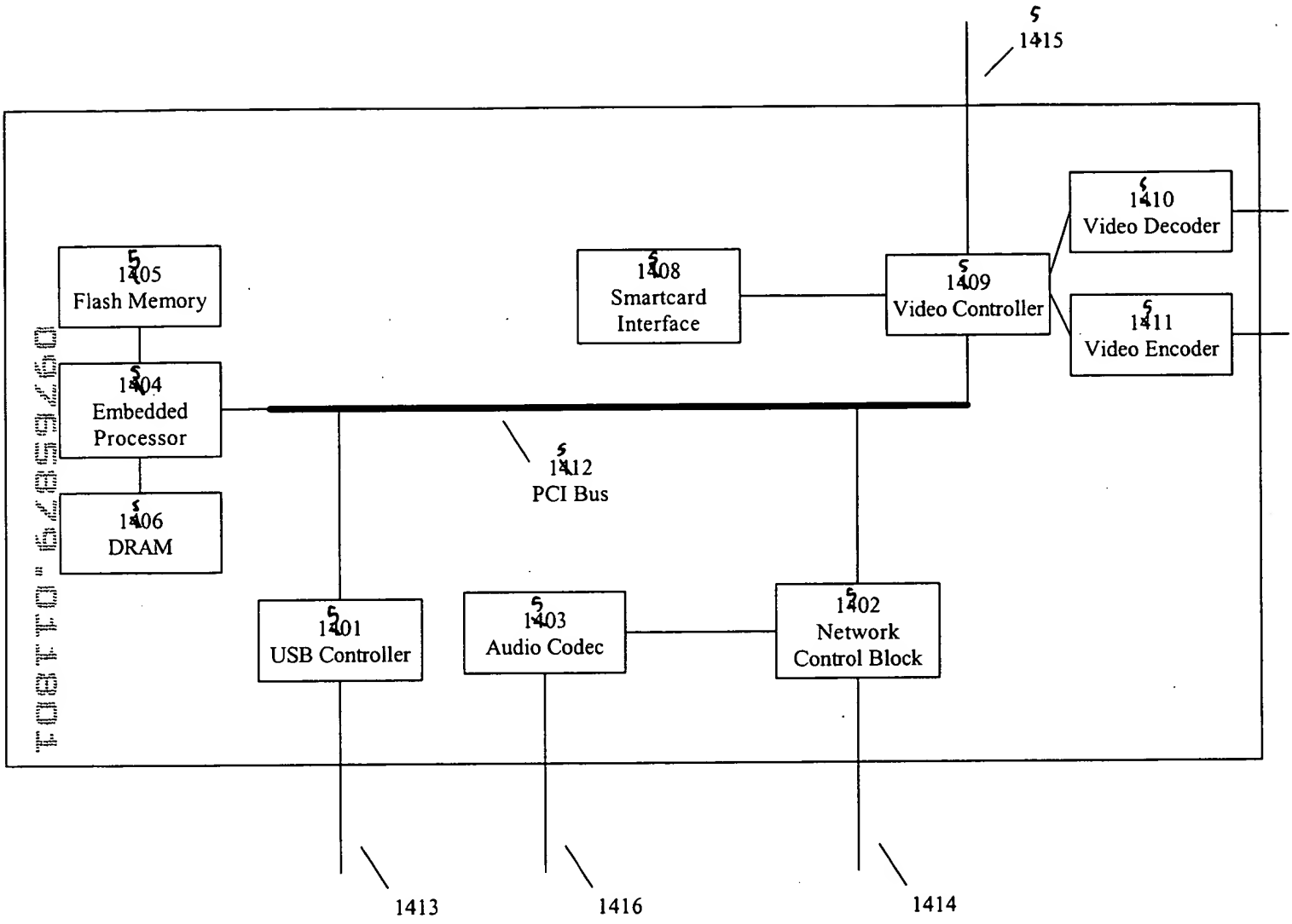

Figure 14: HID